

Importing and Exporting Data

In this chapter, you'll find explanations of the kinds of data transfers that can be made to or from CAMEO, and instructions for completing each kind of transfer. You'll also find background information you'll need to know to avoid problems when you transfer data.

Avoiding trouble

To avoid trouble when you transfer data to and from CAMEO, we recommend that you

- always back up your existing data before importing new data into CAMEO. It's easy to do: just export all the data from the affected module(s) into an archive file (see "Exporting data from all CAMEO modules" on page 213 and "Exporting data from all records in a CAMEO module" on page 213).
- follow the **CAMEO Data Ownership Rule**.

The Ownership Rule says that the CAMEO user with the most intimate knowledge of the data on a CAMEO record should be considered the **owner** of that record. The owner of a record should be the only person who makes

changes to it (or directs others to change it). To implement the Ownership Rule, first, establish who owns which data. Then, import data only from its owner, and export data only if you own it.

Here's an example of how the Ownership Rule works in practice: Suppose that you work for a fire district that has a mutual aid agreement with neighboring districts. Also suppose that each district has agreed to be responsible for collecting information about the facilities in their district and creating CAMEO records describing those facilities.

To prepare for mutual aid calls, you might want to import the other districts' facility records into your copy of CAMEO. The other districts likewise might ask you to export your facility records to them, for use in their copies of CAMEO. You can avoid causing problems for yourselves by agreeing to the following rules:

- each district is the owner of the data describing the facilities in its own fire district.
- each district will export only the records that it owns.
- each district will import records only from their owner.

To export your facility records to the other districts, you would follow the steps in "Exporting data from a subset of the records in a module" on page 214 to export just the data for the facilities in your district.

What if your fire district, and the neighboring districts, instead receive your facility data from the SERC, which compiled that data from submitted Tier II reports? You would then consider the SERC to be the owner of the facility data for all your districts. Each district would import data only from the SERC. Districts would never export facility records.

Why following the Ownership Rule can save you time and trouble has to do with the way CAMEO keeps track of records. See "How CAMEO assigns and uses record IDs" on page 198 for details.

For suggested strategies for avoiding inadvertent record duplication, see "Strategies for avoiding duplicate records" on page 219.

Important: Do not delete either the ImportFiles or ExportFiles folder from your CAMEO folder. Without them, CAMEO cannot import or export data.

Possible data transfers

You can transfer data to and from CAMEO in four ways (Figure 1):

- from a previous version of CAMEO to the current version. You can do this yourself in Windows. We can make the update for you, or help you with it, if you use CAMEO on a Macintosh. See “Importing data from a previous version of CAMEO” on page 201.
- from Tier2 Submit to CAMEO. Tier2 Submit is a program (new in 2002) used by facilities for preparing and submitting Tier II chemical inventory reports. See “Importing data from Tier2 Submit” on page 206.
- between two copies of CAMEO. See “Transferring data between different copies of CAMEO” on page 212.
- from CAMEO to a data file that can be imported into a spreadsheet, database, or other program. See “Exporting data to other programs” on page 223.

Difficult or impossible data transfers

Two kinds of data transfers can’t be made, or can be made only with difficulty:

- Data can’t be exported from CAMEO to Tier2 Submit.¹
- It would be difficult, though not impossible, to import data created in non-CAMEO programs into CAMEO. A file using CAMEO’s field order and format could be imported into CAMEO, but you would need to carefully consider assignment of record IDs (see “How CAMEO assigns and uses record IDs” on page 198).

1. Data can be transferred between different copies of Tier2 Submit. See the Tier2 Submit manual for details.

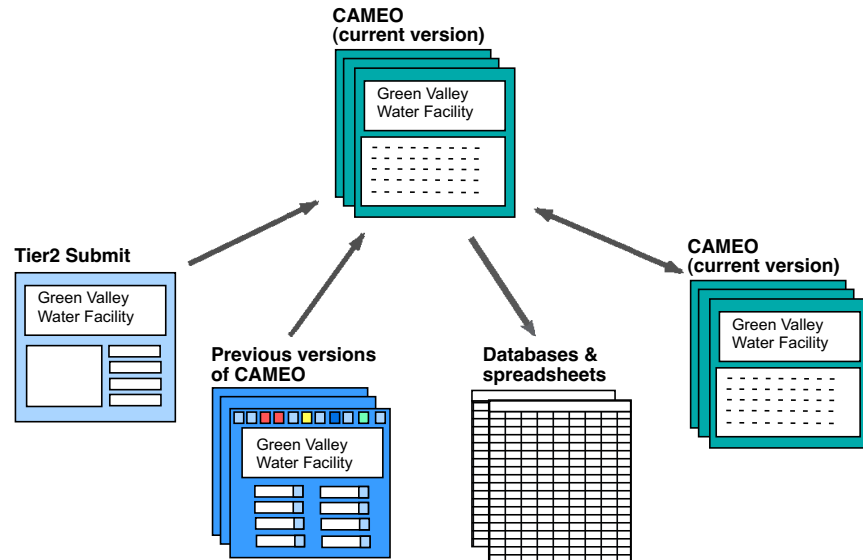


FIGURE 1. Possible data transfers that can be made to and from CAMEO.

If you want to try creating an import file, first open and inspect in a database or spreadsheet program a file exported from any CAMEO module, so that you can see the field order and format used by CAMEO. The first record within any file exported from CAMEO provides data field names and field order; import files must be in zipped merge format (see “Zipped merge files: CAMEO’s standard file format” on page 197).

CAMEO does not include a feature for importing data directly from any previous Macintosh (Hypercard) versions of CAMEO. If you need to import data from a previous Macintosh version of CAMEO into the current version, contact us at ORR.CAMEO@noaa.gov for help with that data transfer.

Things to know before transferring data

Before beginning data transfers, it's helpful to understand

- the format of the zipped **merge files** CAMEO uses in data import and export operations.
- the behind-the-scenes **record ID** method CAMEO uses to keep track of relationships among records in related modules.

Zipped merge files: CAMEO's standard file format

To import and export data, CAMEO uses a standard type of data file called a merge file. When you export data from CAMEO, a merge file is created for each module from which data is exported (merge files are also created for behind-the-scenes supporting files). Merge files exported from CAMEO contain the data exported from the corresponding modules and/or supporting files.

A merge file is a text file in which data fields are separated by commas, records are separated by carriage returns, and the contents of each data field are enclosed in quotation marks. A merge file has a file extension of .mer (for example, "export.mer").

With each data export, the merge files exported from CAMEO are automatically compressed together into a single zipped file, which has a file extension of .zip (for example, "export.zip"). Depending on the nature of the data you're exporting from CAMEO, the zipped file created by CAMEO may contain a single merge file or multiple merge files.

Once you've exported merge files from CAMEO and have uncompressed (unzipped) them, you can open and work with them in standard database and spreadsheet programs, and in text editing programs.

The format of Tier2 Submit files. You might receive Tier2 Submit data files either directly from facilities reporting their chemical inventory data or from colleagues. Tier2 Submit data files contain the Tier II information sub-

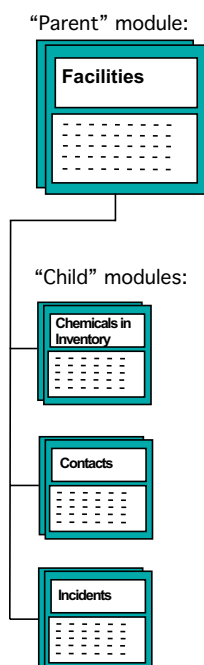
mitted by those facilities, and can be imported into CAMEO (see “Importing data from Tier2 Submit” on page 206). A data file generated from Tier2 Submit is a collection of individual merge files compressed together into a single zipped file. CAMEO can automatically uncompress a Tier2 Submit file and import the data from the merge files.

How CAMEO assigns and uses record IDs

CAMEO uses **record ID numbers**, or record IDs, to keep track of the records in its modules and the relationships between records.

Each new record is assigned a unique 20-character record ID at the moment it’s created. In the case of CAMEO’s facility records, a record ID is assigned to a given facility in either of two ways:

- When you first create a facility record in CAMEO, a record ID is automatically generated for that record.
- When a file is created for a facility in Tier2 Submit, a record ID is created for that facility. The file exported from Tier2 Submit contains that record ID, which is imported into your copy of CAMEO when you import that Tier2 Submit file into CAMEO.



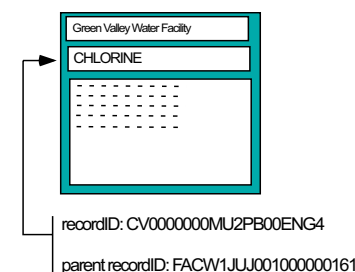
Parent and child modules and record IDs. Record IDs are used in CAMEO to track relationships among records stored in different modules, particularly relationships between records in “parent” and “child” modules. In CAMEO, as with other kinds of databases, some modules are related to each other in somewhat the same way that parents and children are related: child modules are subordinate to parent modules. For purposes of tracking relationships among records in CAMEO,

- The Facilities and Routes modules are parent modules, as are the Special Locations, Chemical Library, and Resources modules.
- The Chemicals in Inventory, Contacts, and Incidents modules are child modules, because the main purpose of these modules is to store information that helps to describe facilities, routes, and special locations.

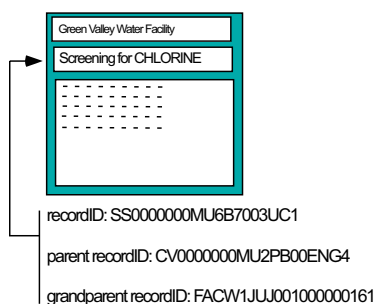
For example:

Things to know before transferring data

- Chemicals in Inventory records describe either chemicals in a facility's inventory or chemicals routinely transported along a given route.
- Incidents records typically describe incidents that have happened at facilities or along routes.
- Contacts records describe contact people for facilities and special locations. Other Contacts records may describe people involved in incidents, such as the discharger or the notified agency, and/or contact people for companies that provide response resources (records on such companies can be kept in the Resources module).



In the Facilities and Routes modules, each new facility or route record is assigned a record ID when it is created. From then on, when a new Chemicals in Inventory record is created to describe a chemical (or mixture) stored at a given facility or transported on a given route, the new record is given its own unique record ID and also a **parent record ID** that matches the facility or route's record ID, as in the example Chemicals in Inventory record at left. CAMEO uses the parent record ID to track the facilities or routes associated with the Chemicals in Inventory record.



Screening & Scenarios can be considered a “grandchild” module because it is subordinate to the Chemicals in Inventory module, just as the Chemicals in Inventory module is subordinate to the Facilities and Routes modules. For that reason, any Screening & Scenarios record contains (a) its own unique record ID, (b) the parent record ID for the related Chemicals in Inventory record, and (c) the **grandparent record ID** for the facility or route record that is related to the Chemicals in Inventory record, as in the example Screening & Scenarios record at left. CAMEO uses the parent record ID to associate the Screening & Scenarios record with the Chemicals in Inventory record, allowing information about the chemical to be used in hazard zone estimation. It uses the grandparent record ID when you choose to plot a hazard zone on a map (the hazard zone is plotted either around the facility or along the route that has a record ID matching the grandparent record ID).

Data transfers and record IDs. For each record in a data file exported from one copy of CAMEO into another copy of CAMEO, one of two things happens:

- a new record is created in the target copy of CAMEO to hold the newly imported data.
- an existing record is updated.

What determines the outcome—whether a new record is created or an existing record is updated—is the record ID for that record, which is included in the file and imported along with the rest of the data in that record. The record ID for each imported record is compared with the record IDs for the existing records in a given target module:

- If no match is found, a new record containing the imported data is added to the target module, and the record ID for the new record is set to match the record ID of the imported record.
- if a match is found, the corresponding record in the target module is updated with the imported data. During the update, *all* the data in the target record is replaced by the data in the matching imported record.

Records in CAMEO, especially records describing facilities, can be duplicated when you might not necessarily expect it, because of how CAMEO uses record IDs. For example,

- a duplicate record for a facility is created if a record for that facility exists in your Facilities module and you import a Tier2 Submit file containing information about that facility. That's because both CAMEO and Tier2 Submit assigned different record IDs to that facility.
- records can be duplicated when you transfer data between two copies of CAMEO, if the source and target modules each contain a record for the same entity, such as a facility, and if those records came from different sources, and hence have different record IDs.

The best way to avoid unintended record duplication is to follow the CAMEO Data Ownership Rule. Also see “Strategies for avoiding duplicate records” on page 219 for other strategies for avoiding or troubleshooting unintended record duplication.

Viewing record IDs. Record ID numbers are not displayed directly in CAMEO's windows, and you generally don't need to see the record IDs for the records in your copy of CAMEO, but you can view them if you need to.

You might want to view the record IDs in a particular module if you suspect that the module contains unwanted duplicates of some records.

To see the record IDs in any of your CAMEO modules,

1. Export the data from that module, following the steps in “Exporting data from all records in a CAMEO module” on page 213.
2. Open the exported file in a spreadsheet program, following the steps in “Exporting data to other programs” on page 223.

In the exported file, you can recognize record IDs by their distinctive format. Each is 20 characters long, and the record IDs for each CAMEO module can be identified by their unique two-letter prefix. For example, the first two characters of any facility record ID are “FA.”

Importing data from a previous version of CAMEO

In Windows

To import your data from your CAMEO for Windows 1.2.1 program to your new version of CAMEO, use the CAMEO Transfer Utility. It transfers your CAMEO for Windows 1.2.1 data into a file that you import into your new copy of CAMEO (like CAMEO export files, this transfer file is a zipped file containing one or more merge files).

Important: If your version of CAMEO for Windows is older than version 1.2.1, you must update to version 1.2.1 before you can use the Transfer Utility. You can find CAMEO updaters at www.epa.gov/ceppo/cameo/request.htm.

Installing the Transfer Utility. You first need to download and install the Transfer Utility:

1. Download a copy of the CAMEO Transfer Utility installer (TransferUtilityInstaller.exe) from www.epa.gov/ceppo/cameo/request.htm to your hard drive.

2. Double-click on TransferUtilityInstaller.exe to start the Transfer Utility installer.
3. Follow the instructions you'll see on your screen to install the CAMEO Transfer Utility into a new Transfer folder inside your CAMEOWIN folder.

The installer is set up to install the utility into C:\CAMEOWIN. If your CAMEOWIN folder is somewhere else, be sure to indicate its location.

Don't move the Transfer folder once you've installed it. Moving it would break the link from the Start menu to the utility.

Transferring your data. Follow the steps below to transfer the data from your CAMEO for Windows 1.2.1 records into your new copy of CAMEO.

When you follow the procedure below, information stored in data fields and records in your copy of CAMEO for Windows 1.2.1 is automatically copied into corresponding data fields and records in your new copy of CAMEO. All the notes that you've typed in the User Fields on records in your previous copy of CAMEO are placed in the Notes fields in corresponding new records in your new copy of CAMEO (each note is labeled by the name of the user field it was stored in). Links from facility records to site plans also are transferred, along with links between map symbols and facility, route, special location, incident, and resource records:

4. From the Start menu, select Programs, then CAMEO Transfer Utility, then Transfer Utility.
5. Click Start Transfer.

The utility displays the progress of the data extraction as a log in its main window. The extraction process is complete when "Done with Export-CAMEOWinData" appears as the last line of the log.

6. When prompted, type a name for the export file, then choose a location for it (which can be anywhere on your hard drive).
7. Exit from the Transfer Utility.
8. Copy the export file onto another storage device, to serve as a backup file.
9. If you have entered new data into your new copy of CAMEO, back that data up before proceeding further (follow the steps in "Exporting data

from all CAMEO modules” on page 213 or “Exporting data from all records in a CAMEO module” on page 213).

10. Start your new copy of CAMEO.
11. From CAMEO’s File menu, select Import/Export.
12. Click Import.
13. Click Import again.
14. Locate and select the export file you just created, then click Open. The data from your file will be transferred into your new copy of CAMEO. The progress of the data import will be shown in a log in CAMEO’s main import window. The process is complete when “IMPORT IS COMPLETE” appears as the last line of the log and you see an alert message, “Import of records is complete.”
15. After you’re told that the transfer has been completed, click OK, then click Done.
16. Turn to “Transferring your CAMEO Map”, below, for instructions on what to do with your CAMEO Map.
17. If you have facility site plans you’d like to transfer, follow the steps in “Transferring your site plans” on page 205.

Important: If you plan to continue to add or edit records in CAMEO for Windows 1.2.1 while you try out your new copy of CAMEO, leave the Transfer folder in place inside your CAMEOWIN folder. Once you’re ready to completely shift your files to your new copy of CAMEO (and add no more data to CAMEO for Windows 1.2.1), then run the Transfer Utility to transfer your CAMEO for Windows 1.2.1 data one last time. As long as you haven’t moved the folder, your records will be updated with the new information you entered in CAMEO for Windows 1.2.1 (if you move the folder, records can be inadvertently duplicated).

Transferring your CAMEO Map. You should keep just one copy of your CAMEO Map on your hard drive. Otherwise, you’ll encounter problems when you work with both the CAMEO modules and MARPLOT.

When you install your new copy of CAMEO, a new copy of the CAMEO Map is installed along with it. You need to decide whether to keep the new copy or the older copy that came with CAMEO for Windows 1.2.1. The

new copy is in the CAMEO folder; the old copy is in the CAMEOWIN folder.

If you decide to keep the old copy, you'll need to move it from the CAMEOWIN folder to the CAMEO folder. You need to decide when to do that. Here's a decision guide:

- 1. Decide whether to keep your old copy of the CAMEO Map:**

You should keep it if you made changes to it that you want to keep. For example, you may have added map objects like symbols for facilities, routes, and special populations while you were using CAMEO for Windows 1.2.1. You also may have linked map symbols to records in CAMEO for Windows 1.2.1.

 - a.** Did you decide to keep the old map? If so, skip down to step 2 now.
 - b.** Did you decide not to keep the old map? Then delete it: open your CAMEOWIN folder and drag the CAMEOMAP folder to the Recycle Bin. That's all you need to do—skip all the remaining steps in this guide!
- 2. To keep your old map, delete the new copy of the map:** open your CAMEO folder, and drag the CAMEOMAP folder to the Recycle Bin.
- 3. Decide whether you're ready to discontinue your use of CAMEO for Windows 1.2.1.** You might want to keep using it while you try out your new copy of CAMEO. Or you might be ready to completely stop using it and to change to your new CAMEO.
 - a.** If you're *not* ready to discontinue using CAMEO for Windows 1.2.1, then leave your CAMEO Map in your CAMEOWIN folder until you are ready to completely switch all your work and data to your new copy of CAMEO. Once you're ready to switch over, go to step b.
 - b.** If you *are* ready to switch completely to your new copy of CAMEO, then move the CAMEOMAP folder from your CAMEOWIN folder into your CAMEO folder. Once you move the folder, you will no longer be able to work with both CAMEO for Windows 1.2.1 and the CAMEO Map together. But you'll be ready to work with both the CAMEO Map and your new copy of CAMEO.

After you've transferred your CAMEO for Windows 1.2.1 data, then while the CAMEO Map remains in the CAMEOWIN folder,

- In your new copy of CAMEO, you'll be able to use any links between records and map objects that you made up to the time you transferred your data. Those links transferred along with your data when you followed the steps in "Transferring your data" on page 202. You'll be able to move back and forth readily between records in CAMEO and symbols on your map.
- Unless CAMEO for Windows 1.2.1 is running, you won't be able to delete any objects you placed on your map before you transferred your data. Once you move the map to the CAMEO folder, you'll be able to delete objects without running CAMEO for Windows 1.2.1.
- You should not add any links from map objects to records in your new copy of CAMEO. Add links only while working with CAMEO for Windows 1.2.1. Then, once you're ready to completely switch to your new CAMEO, (a) follow the steps in "Transferring your data" on page 202 to transfer any data you've added to CAMEO for Windows 1.2.1, then (b) move your CAMEO Map into your CAMEO folder. Your new links will transfer to the new CAMEO.

Transferring your site plans. If you created site plans in Site Plan Viewer, you'll need to move them from your CAMEOWIN folder into your new CAMEO folder in order to use them in your new copy of CAMEO. Here's how:

1. Open your CAMEOWIN folder, then open the SPLNBMPs folder. You should see your site plan files.
2. Move or copy your site plan files from the SPLNBMPs folder into the SitePlans folder inside your new CAMEO folder.

Links between your CAMEO for Windows 1.2.1 facility records and your site plans are transferred when you run the CAMEO Transfer Utility. Once you've moved your site plan files to the SitePlans folder, your site plans are automatically linked to the corresponding facilities records in your new copy of CAMEO. If you observe that any links are missing after you've completed your transfers, check "Adding and editing site plans" on page 121 to see instructions for remaking or revising links to site plans.

On a Macintosh

In the current version of CAMEO, there is no built-in procedure for importing data from the previous version of CAMEO for Macintosh. If you are a Macintosh user and would like to import data from a previous version of CAMEO into the new version, please contact ORR.CAMEO@noaa.gov to arrange for assistance with your data transfer.

If you have made changes to your CAMEO Map that you'd like to keep, then, once you install your new copy of CAMEO,

1. Open your new CAMEO folder, and drag the CAMEOMAP folder into the trash.
2. Move the CAMEO Map folder from your old CAMEO™ folder into the new CAMEO folder. Rename the map folder from “CAMEO Map” to “CAMEOMAP.”

Importing data from Tier2 Submit

Under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), facilities that maintain more than threshold amounts of certain hazardous materials must submit an annual chemical inventory report, called a Tier II form, to their state's State Emergency Response Commission (SERC), Local Emergency Planning Committee (LEPC), and local fire department. Operators of facilities covered by EPCRA who must submit an annual Tier II report can use Tier2 Submit to prepare and submit that report as an electronic data file (see “Tier2 Submit™” on page 8).²

You might receive such Tier2 Submit files if you are

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2. If you receive any data files exported from the older Tier II program (which Tier2 Submit has superseded), you'll need to use the following two-step procedure to import the data into your new copy of CAMEO. First, import the data file into CAMEO for Windows 1.2.1. Second, use the CAMEO Transfer Utility to export the data from CAMEO for Windows 1.2.1, and then import it into your new CAMEO, following the steps in “Importing data from a previous version of CAMEO” on page 201.

- a member of a SERC, LEPC, or local fire department to whom facilities submit their reports.
- a local responder or planner who receives, from your SERC or LEPC, a Tier2 Submit file of data for facilities in your area.

You can import Tier2 Submit data files into CAMEO. When you import a Tier2 Submit file into CAMEO, data from that file will be imported into the Facilities, Chemicals in Inventory, and Contacts modules, as follows (Figure 2 on page 208):

- a new Facilities record will be created for each facility described in the Tier2 Submit file. It will be assigned the record ID generated for that facility by Tier2 Submit.
- a new Chemicals in Inventory record will be created for each chemical (or mixture) in a given facility's inventory that's listed in the Tier2 Submit data file. The parent record ID assigned to this record will match the facility's record ID.
- a new Contacts record will be created for each contact person listed in the Tier2 Submit data file. The parent record ID assigned to this record will match the facility's record ID.

Note: The procedure for importing a Tier2 Submit file is unaffected by how many facilities are represented in the file. A Tier2 Submit file submitted by the operator of a reporting facility would generally contain information for just a single facility. In contrast, a Tier2 Submit file generated by a SERC to share with local planners and responders would contain data on multiple facilities.

Things to know before importing Tier II data

If your copy of CAMEO already contains records for some of the facilities, chemicals in inventory, and/or facility contacts included in the Tier2 Submit file (either because you created those records manually or because you imported a Tier2 Submit data file in a previous reporting year), new records for all those facilities, chemicals, and contacts will be created when you import the Tier2 Submit file. The existing records will not be updated. That's because Tier2 Submit generates its own record IDs when someone

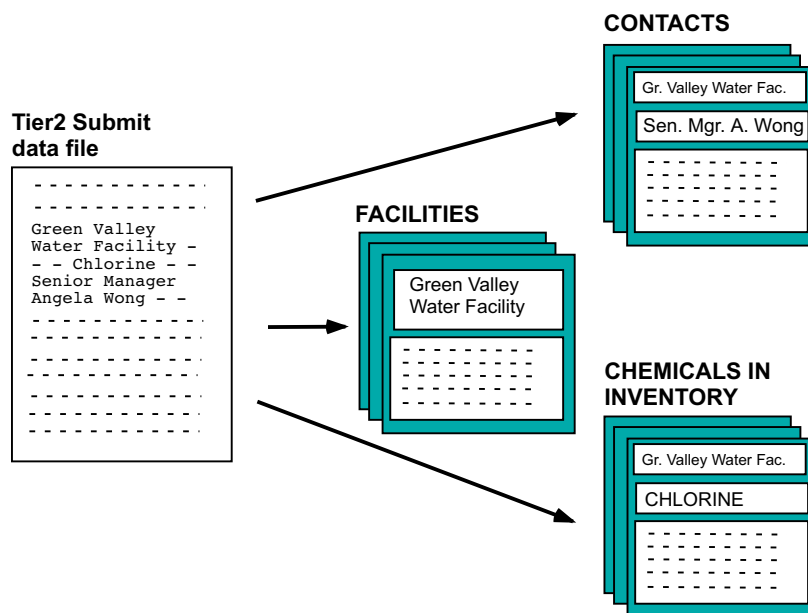


FIGURE 2. Destinations of Tier II data in CAMEO. Data from a Tier2 Submit file is imported into the Facilities, Chemicals in Inventory, and Contacts modules.

enters information in that program. Those record IDs are imported into CAMEO when the Tier2 Submit file is imported, and they will not match the record IDs that CAMEO has assigned to the corresponding Facilities, Chemicals in Inventory, or Contacts records.

Given CAMEO's record-keeping method, there are two ways for you to manage your Tier II data in CAMEO, each with advantages and drawbacks:

First, you can simply import new Tier2 Submit data file(s) for the facilities of interest to you each year, following the steps in "Importing a Tier2 Submit data file" on page 211. Then, for each reporting facility, *for each reporting year*, there will be one record in your Facilities module, one Chemicals in Inventory record for each chemical (or mixture) in the facility's inventory, and a new Contacts record for each facility contact. Note that there

will be multiple Contacts records for the same contact person if multiple facilities have reported the same contact person.

Because reporting year is shown in the Report Year box on records in the Facilities and Chemicals in Inventory modules, you can differentiate among records that were created in different reporting years in these modules.

If you have facility records from multiple reporting years, and want to work with your Facilities records for just the current reporting year,

1. Open the Facilities module and then, from the Search menu, select Start Search.
2. Type the current reporting year in the Report Year box, then click Search.

The found set for this search will contain just the Facilities records for the current reporting year.

You can use the same procedure in the Chemicals in Inventory module to find just the Chemicals in Inventory records for the current reporting year.

If you want to see the record for a particular facility for the current reporting year,

1. Open the Facilities module and then, from the Search menu, select Start Search.
2. Type the facility's name in the Facility Name box.
3. Type the current reporting year in the Report Year box, then click Search.

Only the record for the given facility for the current reporting year will be found.

If instead you want to view the data for a particular facility from all consecutive reporting years,

1. Open the Facilities module and then, from the Search menu, select Search.
2. Type the name of the facility in the Facility Name box, then click Search.

The found set for this search will contain only the records for the given facility, for all reporting years.

To sort these records by date, follow the instructions in “Sorting records by a single criterion” on page 259 to sort the found set by Record Year.

Reporting year is not shown on Contacts records. To access the most recent Contacts record for a facility contact person, begin in the Facilities module rather than the Contacts module:

1. Open the most recent Facilities record for that facility in Record view.
2. Click the Contacts tab.
3. Double-click on the name of the contact person. The most recent Contacts record for that contact will be displayed.

Note: An alternative procedure is to select or open the most recent Facilities record for the facility, then, from the Record menu, select Show Related, then Contact Records.

An alternative way to manage your Tier II data is as follows: Rather than keeping data from multiple reporting years in your copy of CAMEO, you could delete all the records for previous reporting years and then import the current year’s Tier2 Submit file(s). When you then import Tier2 Submit data file(s) for facilities of interest submitted in the current reporting year, then for each reporting facility, there would be just one record in your Facilities module, just one Chemicals in Inventory record for each chemical (or mixture) in the facility’s inventory, and just one Contacts record for each contact person for that facility (unless multiple facilities have listed the same contact person).

Important: Do *not* choose this approach if you foresee needing facility-related data from previous reporting years in any of the following modules: Facilities, Contacts, Chemicals in Inventory, Incidents, and Screening & Scenarios. For example, if you want to keep Incidents records for accidents at a particular facility over a period of years, avoid this approach.

If you choose this approach and want to back up your Tier II data from previous year(s) and then delete those records from CAMEO, before you import Tier2 Submit data file(s) for the current reporting year:

1. Start CAMEO if it isn't already running, and open the Facilities module.
2. From the File menu, select Import\Export, then click Export.
3. Click Export Data for Entire Module.

When you export data from the Facilities module, data also is exported from related records in Contacts, Chemicals in Inventory, Incidents, and Screening & Scenarios. The result of the export is a single zipped file containing a set of merge files.

4. When prompted, choose a location for the export file. A zipped file containing your exported data will be created at that location. We recommend that you make a second copy of the archive file on another storage device.
5. While the Facilities module is still open, select Show All Records from the Record menu.
6. From the Record menu, select Delete All Records.

This deletes all records from the Facilities module. Records related to the deleted facilities in the Chemicals in Inventory, Contacts, Incidents, and Screening & Scenarios modules are also deleted (except for any Contacts records that are also related to other entities that are not deleted, such as Resources records).

Importing a Tier2 Submit data file

Follow the steps below to import a Tier2 Submit file:

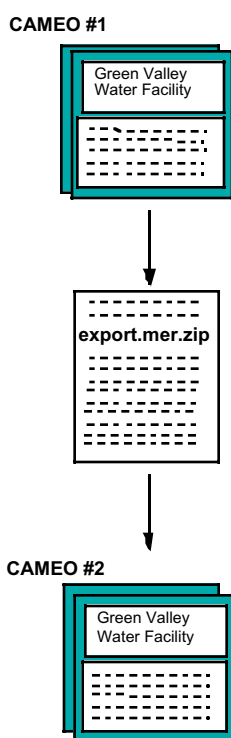
1. Start CAMEO.
2. Back up your facilities-related data, following the procedure in "Exporting data from all records in a CAMEO module" on page 213.
3. From the File menu, select Import\Export.
4. Click Import, then click Import again when reminded to back up your data.
5. Find and open the Tier2 Submit file. The import will start immediately.

Check Figure 2 on page 208 to see the kinds of new records created in CAMEO when you import a Tier2 Submit file, and the modules where they will be located.

Note: If you accidentally import the same Tier2 Submit data file more than once, don't worry. Each of the newly imported records will simply be overwritten, rather than duplicated.

Transferring data between different copies of CAMEO

In some situations, you might need to transfer data between your own copy of CAMEO—the **source** copy—and someone else's—the **target** copy.



To transfer data from your copy of CAMEO to someone else's, you export the data from your own records into an export file. Your colleague then imports the data from that file into her copy of CAMEO, as at left. If instead you receive data from your colleague, you would import her export file.

You can export data

- from all your CAMEO modules at once, except for the Chemical Library. It's the only CAMEO module from which you can't export data; you also can't import data into the Chemical Library.
- from a single CAMEO module. Data also will be exported from related records in child and grandchild modules. For example, when you export Facilities records, related records in Chemicals in Inventory, Contacts, and Screening & Scenarios also are exported.
- from a found set of records in a single CAMEO module (that is, a set of records found during a search). Data also will be exported from related records in child and grandchild modules (for example, from Chemicals in Inventory, Contacts, and Screening & Scenarios along with Facilities).
- from a single CAMEO record (as well as from related records in child and grandchild modules).

When you transfer data between two copies of CAMEO, it's possible to unintentionally duplicate records. Before transferring data, review "Data transfers and record IDs" on page 199.

Exporting data from all CAMEO modules

You sometimes might want to export all the data from all your CAMEO modules into a single export file. This procedure is an easy way to create a backup archive file of all your CAMEO data.

To export all the data from all your CAMEO modules *except* the Chemical Library, follow the steps below:

1. From the File menu, select Import\Export, then click Export.
2. Click Export ALL CAMEO Data.
3. Select a location for your export file, then click Save. All the data from all the records in all your CAMEO modules except the Chemical Library will be exported to a single zipped file at that location.

If some of the exported records are linked to map objects that you want to export, follow the procedure in “Transferring map links and map objects” on page 216.

If some of the exported Facilities records are linked to site plans that you want to export, follow the procedure in “Transferring site plans” on page 217.

Exporting data from all records in a CAMEO module

Sometimes, you might need to transfer all the data from just one module, along with data from related records in any child or grandchild modules. You might want to do this, for example, if you represent a fire district that has just entered into a mutual aid agreement with neighboring districts. If each district has in its copy of CAMEO only records for facilities in that district, then each district could export all its facility data, and share that export file with neighboring districts. Under the CAMEO Data Ownership Rule, each district would “own” the data for facilities in that district. Note, though, that if each district has records for facilities not only in its own district but also in neighboring districts, each district would instead export just the subset of its records containing only the facilities in its own district (see “Exporting data from a subset of the records in a module” on page 214).

To export all the data from a CAMEO module:

1. Open the module from which you want to export data.
If you want to export facility data, open the Facilities module. To export transportation routes data, open Routes. Whenever you export data from either of these modules, related data in the Chemicals in Inventory, Contacts, Incidents, and Screening & Scenarios modules also is exported.
2. From the File menu, select Import/Export, then click Export.
3. Click Export Data for Entire Module.
4. Select a location for your export file, then click Save. All the data from all the records in the open module, along with all data from related records in child and grandchild modules, will be exported to a single zipped file at that location.

If some of the exported records are linked to map objects that you want to export, follow the procedure in “Transferring map links and map objects” on page 216.

If you are exporting Facilities records that are linked to site plans that you also want to export, follow the procedure in “Transferring site plans” on page 217.

Exporting data from a subset of the records in a module

Sometimes, you might need to transfer data from only certain records in a CAMEO module, along with data from related records in any child or grandchild modules. Here’s an example: Tier II data is particularly useful to emergency responders. So if you’re a member of a SERC that has received Tier II data, you might want to share that data with county- and tribal-level response organizations and/or with fire departments. You might want to export only certain records to each receiving organization: for example, just the records for King County to that county’s emergency management organizations.

Exporting from a subset of records can be a way to honor the CAMEO Data Ownership Rule. When you need to export records, you can search a

module to create a found set containing just the records you “own”—for example, just your fire district’s records, rather than all your facility records. You then export just the found set.

To export only a subset of records from a CAMEO module:

1. In the module, create a found set containing just the records you want to export.

To do this, search the module in such a way that only the records you want will be found. For example, to create a found set in the Facilities module that contains just the records for facilities in Johnson County, choose Start Search from the Search menu, type “Johnson” in the County box, then press Search. (For more details about setting up searches, see “Searching” on page 251).

If you want to export facility data, open the Facilities module. To export transportation routes data, open Routes. Whenever you export data from either of these modules, related data in the Chemicals in Inventory, Contacts, Incidents, and Screening & Scenarios modules also is exported.

2. From the File menu, select Import\Export, then click Export.
3. Click Export Data for Found Set.
4. Select a location for your export file, then click Save. All the data from all the records in the found set, along with all data from related records in child and grandchild module, will be exported to a single zipped file at that location.

If some of the exported records are linked to map objects that you want to export, follow the procedure in “Transferring map links and map objects” on page 216.

If some of the exported records are Facilities records that are linked to site plans that you also want to export, follow the procedure in “Transferring site plans” on page 217.

Exporting data from a single CAMEO record

You can export the data from just a single CAMEO record, along with data from related records in child and grandchild modules:

1. Select the record from which you want to export data.
2. From the File menu, select Import/Export, then click Export.
3. Click Export Data for Current Record.
4. Select a location for your export file, then click Save. The data from the record, along with all data from any related records in child and grand-child modules, will be exported to a single zipped file at that location.

Transferring map links and map objects

Sometimes, you might need to export records that are linked to objects on your CAMEO map. You might need to share with a colleague not only the data from those records, but the map objects as well.

To export all the records, map links, and map objects linked to records in a CAMEO module,

1. Export the records, following the instructions in “Exporting data from all records in a CAMEO module” on page 213. The exported file contains the data from your records, including the map links from linked records, but not the linked map objects themselves.
2. Open the module (if it isn’t already).
3. From the Sharing menu, select MARPLOT, then Show All on Map.
4. The map objects linked to records in this module will be selected and displayed.
5. While the objects remain selected, from MARPLOT’s File menu, select Export.
6. Set up the export by clicking “selected objects” and “MARPLOT Import/Export (MIE),” then click Export. An MIE file containing all the selected objects is created. MIE files are a kind of text file that MARPLOT uses for importing and exporting data.
7. Give your colleague both the file you exported from CAMEO and the MIE file.

If you need to export just a subset of the records in a CAMEO module (for example, just the records you own under the CAMEO Data Ownership

Rule, not the records you obtained from someone else) along with related map links and map objects, then

1. Follow the steps in “Exporting data from a subset of the records in a module” on page 214.
2. While the found set is still in place, from the Sharing menu, select MARPLOT, then Show All on Map. Map objects linked to the found records will be selected in MARPLOT.
3. Follow steps 4 to 7 of the preceding procedure.

To import your data, your colleague should do the following:

1. Back up the data in her copy of CAMEO, following the instructions in either “Exporting data from all CAMEO modules” on page 213, “Exporting data from all records in a CAMEO module” on page 213, or “Exporting data from a subset of the records in a module” on page 214. The exported file serves as an archive file.
2. Put the CAMEO file and MIE file that you exported anywhere on her hard drive.
3. From CAMEO’s File menu, select Import\Export, then Import.
4. Click on the name of the exported CAMEO file, then click Open. The data from the file will be imported into her copy of CAMEO.
5. Start MARPLOT.
6. In MARPLOT, from the File menu, select Import.
7. Find the MIE file, click on it to select it, then click Open. The map objects are then added to her CAMEO Map (if she does not have the map layer for the objects, a layer will be created). Map links between the imported records and map objects will now be functional in her copy of CAMEO.

Important: Follow the CAMEO Data Ownership Rule when you transfer map objects (see “Avoiding trouble” on page 193).

Transferring site plans

To share Facilities records that contain links to site plans with a colleague, along with the site plans themselves,

1. Export the records, following the instructions in either “Exporting data from all records in a CAMEO module” on page 213 or “Exporting data from a subset of the records in a module” on page 214.

The exported file contains the data from your records, including the links to site plans, but not the site plans themselves. The site plans are files stored inside the SitePlans folder.

2. Give your colleague both the exported file of facility data and your site plan files.

To import your data and site plans, your colleague should do the following:

1. Back up his facilities-related data, following the instructions in either “Exporting data from all records in a CAMEO module” on page 213 or “Exporting data from a subset of the records in a module” on page 214. The exported file serves as an archive file.
2. Back up the SitePlans folder (in case any of the new site plan files have the same names as files already in the folder).
3. Put the exported CAMEO file anywhere on his hard drive.
4. From CAMEO’s File menu, select Import\Export, then Import.
5. Click on the name of the exported file, then click Open. The file then will be imported into his copy of CAMEO.
6. Place your site plan files inside his SitePlans folder. The links from Facilities records to site plans will now be functional.

Important: Follow the CAMEO Data Ownership Rule when you transfer site plan files (see “Avoiding trouble” on page 193). One possible way to keep track of the owner of a particular site plan file is to include a code in the file name to indicate the owner. For example, you could use “FW1_” as the prefix in the names of all site plan files owned by Fire District 1.

Importing data from another copy of CAMEO

To import a data file exported from someone else’s copy of CAMEO, first check to be sure that the CAMEO Data Ownership Rule is being followed (see “Avoiding trouble” on page 193). That is, be sure that the exporter of the data is its “owner.” Then,

1. Back up the data in all of the CAMEO modules into which you will import data: if you are importing data into multiple CAMEO modules, follow the instructions in “Exporting data from all CAMEO modules” on page 213. To back up a single module, follow the instructions in “Exporting data from all records in a CAMEO module” on page 213. Your exported file serves as an archive file.
2. Place the export file anywhere on your hard drive.
3. From CAMEO’s File menu, select Import\Export, then Import.
4. Click on the name of the export file, then click Open. The file then will be imported into your copy of CAMEO.

If you need to import map objects, follow the procedure described for the data recipient in “Transferring map links and map objects” on page 216.

If you need to import site plans, follow the procedure described for the data recipient in “Transferring site plans” on page 217.

Strategies for avoiding duplicate records

The key to successfully exchanging data between two copies of CAMEO—so that all parties obtain just the data they want and no data they don’t want—is to honor the CAMEO Data Ownership Rule (see “Avoiding trouble” on page 193). Below are additional troubleshooting suggestions, in case a procedure goes awry despite your best efforts at honoring the rule.

Things to do before importing data. The following two strategies, which you can adopt *before* you import data, can help you to avoid unintended duplicate records.

You sometimes might know or suspect that duplicate records will be generated when you import data from a colleague. For example, you might have obtained facility data from one colleague, but later realize that a different colleague is the actual owner of that data. Your records and the owner’s records for the same facilities then are likely to have different record IDs, so if you import the owner’s data for those facilities, you’re likely to obtain duplicate records (see “How CAMEO assigns and uses record IDs” on page 198).

A solution that you might choose is to delete all the records from your module before you import the owner's data. Do this *only* if it's acceptable to you to replace the entire contents of one of your CAMEO modules (along with related records in child and grandchild modules) with new, imported data. When you import the new file, new records will automatically be created.

Important: Do *not* choose this approach if you foresee needing any of your existing facility-related data in any of the following modules: Facilities, Contacts, Chemicals in Inventory, Incidents, and Screening & Scenarios. For example, if you have created Incidents records for accidents at a particular facility over a period of years, avoid this approach.

To delete all the records from a CAMEO module in preparation for importing data,

1. Follow the directions in "Exporting data from all records in a CAMEO module" on page 213 to back up the data in that module as an export file. We recommend that you also make a copy of the export file on another storage device.
2. From the Record menu, select Delete All Records to delete all the records in the open module (along with related records in child and grandchild modules).

Once you've completed these steps, you're ready to import the new data. Follow the procedure in "Importing data from another copy of CAMEO" on page 218.

Sometimes, you might need to replace only certain records in a module, rather than all the records in a module. For example, you might have obtained facility records for Fire District 20 from a colleague, but then realized that another colleague is the actual owner of the facility data for Fire District 20. Your records and the owner's records for the facilities in Fire District 20 then are likely to have different record IDs, so if you import the owner's data for those facilities, you're likely to obtain duplicate records.

A solution that you might choose *only* if it's acceptable to you to replace all your records for facilities in Fire District 20 with new, imported data is to

delete those records from your module before you import the owner's data. When you import the new file, new records will automatically be created.

Important: Do *not* choose this approach if you foresee needing any of your existing facility-related data in any of the following modules: Facilities, Contacts, Chemicals in Inventory, Incidents, and Screening & Scenarios.

You could simply browse through your Facilities records, deleting those that are to be replaced (related records in child and grandchild modules also will be deleted). To delete a record, select it or open it in Record view, then select Delete Record from the Record menu.

However, whenever you can, run a search that finds just the records that you need to delete, and then delete them, as follows:

1. Open the module in which you want to delete and then replace records. If you need to delete and replace facilities data, open the Facilities module.
2. From the Search menu, select Start Search. Set up and run a search that will find only the records to be replaced. In the case of the example above, you would make an Advanced Search for facility records with "20" in the Fire District field. For help with setting up and running searches, see "Searching" on page 251.
3. Check over the set of found records to be sure that it contains *only* the records to be replaced. When a found set has been created, you can browse through only the records in that found set. So if you see any records that you don't intend to delete, you'll know that you need to refine your search.
4. From the File menu, select Import\Export, then click Export.
5. Click Export Data for Found Set. Before deleting the found records, you'll back up the data from them into an archive file.
6. Choose a location for the new archive file. A zipped file of your exported data will be created at that location. We recommend that you also make a copy of the archive file on another storage device.
7. From the Record menu, select Delete All Found Records. Selecting this command while a found set exists in the module deletes only the found records, leaving the other records in the module untouched.

Once you've deleted the records to be replaced, you're ready to import your new data. Follow the procedure in "Importing data from another copy of CAMEO" on page 218.

Things to do after importing data. If you've already imported data into a CAMEO module, and now realize that you've inadvertently duplicated some records, you may be able to remove unwanted duplicates in one of the following ways. These methods will work *only* if you can tell by visual inspection which duplicates to keep and which to delete.

- Follow the instructions in "Sorting records in CAMEO modules" on page 255 to sort the records in the module so that duplicate records appear next to each other in List view. For example, sort the Facilities module alphabetically by the "FacilityName" data field in order for duplicate records for the same facility to appear adjacent to each other in the list. Browse through the list to find duplicates. Inspect the duplicate records for a given facility or other entity to identify the record to keep. To delete an unwanted duplicate record, select it, then select Delete Record from the Record menu.
- If possible, before you look for duplicates, first run a search to create a found set of just the records likely to be duplicates. For example, you may have realized that you've inadvertently duplicated just the records for contact people in Haymarket. In this case, you would search the Contacts module for records in which the City field contains "Haymarket." Once you've completed the search, from the Record menu, sort the found records as above, then select View List. You then can most quickly browse through the names of all the records found in the search to identify duplicates.

Important: Before beginning either procedure, back up the data in the module by following the procedure in "Exporting data from all records in a CAMEO module" on page 213.

Exporting data to other programs

You can open and view a data file exported from CAMEO in any spreadsheet or database program that supports merge files.

To do this,

1. Uncompress (unzip) the export file. This file contains one or more merge files (one for each CAMEO module from which data was exported, along with a merge file for any supporting files from which data also was exported).
2. Open any of the merge files in your spreadsheet or database program. In merge files, data fields are separated by commas, records are separated by carriage returns, and the contents of each data field are enclosed in quotation marks. A merge file has a file extension of .mer (for example, "export.mer").

For more information about CAMEO's export file format, see "Zipped merge files: CAMEO's standard file format" on page 197.

Tip: To open a merge file in some database or spreadsheet programs, you may need to rename it so that its file extension is .txt rather than .mer.

